Karlson

P#21

1653

RAW SEQUENCE LISTING DATE: 04/12/2002
PATENT APPLICATION: US/09/445,362B TIME: 15:09:45

Input Set : A:\50125.008001.SEQLIST.TXT
Output Set: N:\CRF3\04122002\I445362B.raw

ENTERED

<110> APPLICANT: Hofmann, Marion Elke
Domdey, Horst
Henkel, Thomas
<120> TITLE OF INVENTION: Myocardium-and-Skeletal Muscle-Specific
Nucleic Acid, Its Preparation and Use
<130> FILE REFERENCE: 50125/008001
<140> CURRENT APPLICATION NUMBER: US 09/445,362B
<141> CURRENT FILING DATE: 2000-05-15
<150> PRIOR APPLICATION NUMBER: PCT/EP98/03584
<151> PRIOR FILING DATE: 1998-06-15
<150> PRIOR APPLICATION NUMBER: DE 19725186.2
<151> PRIOR FILING DATE: 1997-06-13
<160> NUMBER OF SEQ ID NOS: 7
<170> SOFTWARE: FastSEQ for Windows Version 4.0
<210> SEQ ID NO: 1
<211> LENGTH: 1936
<212> TYPE: DNA
<213> ORGANISM: Homo sapiens
<400> SEQUENCE: 1
cagcctgcca cttgcctccc tgcctgcttc tggctgcctt gaatgcctgg tccttcaagc 60
tccttctggg tctgacaaag cagggaccat gtctaccttt ggctaccgaa gaggactcag 120
taaatacgaa tccatcgacg aggatgaact cctcgcctcc ctgtcagccg aggagctgaa 180
ggagctagag agagagttgg aagacattga acctgaccgc aaccttcccg tggggctaag 240
gcaaaagagc ctgacagaga aaacccccac agggacattc agcagagagg cactgatggc 300
ctattgggaa aaggagtccc aaaaactctt ggagaaggag aggctggggg aatgtggaaa 360
ggttgcagaa gacaaagagg aaagtgaaga agagcttatc tttactgaaa gtaacagtga 420
ggtttctgag gaagtgtata cagaggagga ggaggaggag tcccaggagg aagaggagga 480
agaagacagt gacgaagagg aaagaacaat tgaaactgca aaagggatta atggaactgt 540
aaattatgat agtgtcaatt ctgacaactc taagccaaag atatttaaaa gtcaaataga 600
gaacataaat ttgaccaatg gcagcaatgg gaggaacaca gagtccccag ctgccattca 660
cccttgtgga aatcctacag tgattgagga cgctttggac aagattaaaa gcaatgaccc 720
tgacaccaca gaagtcaatt tgaacaacat tgagaacatc acaacacaga cccttacccg 780
ctttgctgaa gccctcaagg acaacactgt ggtgaagacg ttcagtctgg ccaacacgca 840
tgccgacgac agtgcagcca tggccattgc agagatgctc aaagccaatg agcacatcac 900
caacgtaaac gtcgagtcca acttcataac gggaaagggg atcctggcca tcatgagagc 960
tctccagcac aacacggtgc tcacggagct gcgtttccat aaccagaggc acatcatggg 1020
cagccaggtg gaaatggaga ttgtcaagct gctgaaggag aacacgacgc tgctgaggct 1080
gggataccat tttgaactcc caggaccaag aatgagcatg acgagcattt tgacaagaaa 1140
tatggataaa cagaggcaaa aacgtttgca ggagcaaaaa cagcaggagg gatacgatgg 1200
aggacccaat cttaggacca aagtctggca aagaggaaca cctagctctt caccttatgt 1260
atctcccagg cactcaccct ggtcatcccc aaaactcccc aaaaaagtcc agactgtgag 1320
gagccgtcct ctgtctcctg tggccacact tcctcctcct ccccctcctc ctcctcctcc 1380
ccctccttct tcccaaaggc tgccaccacc tcctcctcct ccccctcctc cactcccaga 1440

RAW SEQUENCE LISTING DATE: 04/12/2002
PATENT APPLICATION: US/09/445,362B TIME: 15:09:45

Input Set : A:\50125.008001.SEQLIST.TXT
Output Set: N:\CRF3\04122002\I445362B.raw

57 gaaaaagctc attaccagaa acattgcaga agtcatcaaa caacaggaga gtgcccaacg 1500
58 ggcattacaa aatggacaaa aaaagaaaaa agggaaaaag gtcaagaaac agccaaacag 1560
59 tattctaaag gaaataaaaa attctctgag gtcagtgcaa gagaagaaaa tggaagacag 1620
60 ttcccgacct tctaccccac agagatcagc tcatgagaat ctcatggaag caattcgggg 1680
61 aagcagcata aaacagctaa agcgggtgga agttccagaa gccctgcgat gggaacatga 1740
62 tctttagaag aggatgcaga actgttcagt ggtattacat gaaatgcatt gtgagatgtt 1800
63 tctaaaatac cttcttcaat tcaaaatgat ccctgacttt aaaaataatc tcacccatta 1860
64 attccaaaga gaatcttaag aaacaatcag catgtttctt ctgtaaatat gaaaataaat 1920
65 ttctttttta tgtcgt 1936
67 <210> SEQ ID NO: 2
68 <211> LENGTH: 2080
69 <212> TYPE: DNA
70 <213> ORGANISM: Homo sapiens
72 <400> SEQUENCE: 2
73 cagcctgcca cttgcctccc tgcctgcttc tggctgcctt gaatgcctgg tccttcaagc 60
74 tccttctggg tctgacaaag cagggaccat gtctaccttt ggctaccgaa gaggactcag 120
75 taaatacgaa tccatcgacg aggatgaact cctcgcctcc ctgtcagccg aggagctgaa 180
76 ggagctagag agagagttgg aagacattga acctgaccgc aaccttcccg tggggctaag 240
77 gcaaaagagc ctgacagaga aaacccccac agggacattc agcagaggag cactgatggc 300
78 ctattgggaa aaggagtccc aaaaactctt ggagaaggag aggctggggg aatgtggaaa 360
79 ggttgcagaa gacaaagagg aaagtgaaga agagcttatc tttactgaaa gtaacagtga 420
80 ggtttctgag gaagtgtata cagaggagga ggaggaggag tcccaggagg aagaggagga 480
81 agaagacagt gacgaagagg aaagaacaat tgaaactgca aaagggatta atggaactgt 540
82 aaattatgat agtgtcaatt ctgacaactc taagccaaag atatttaaaa gtcaaataga 600
83 gaacataaat ttgaccaatg gcagcaatgg gaggaacaca gagtccccag ctgccattca 660
84 cccttgtgga aatcctacag tgattgagga cgctttggac aagattaaaa gcaatgaccc 720
85 tgacaccaca gaagtcaatt tgaacaacat tgagaacatc acaacacaga cccttacccg 780
86 ctttgctgaa gccctcaagg acaacactgt ggtgaagacg ttcagtctgg ccaacacgca 840
87 tgccgacgac agtgcagcca tggccattgc agagatgctc aaagccaatg agcacatcac 900
88 caacgtaaac gtcgagtcca acttcataac gggaaagggg atcctggcca tcatgagagc 960
89 tctccagcac aacacggtgc tcacggagct gcgtttccat aaccagaggc acatcatggg 1020
90 cagccaggtg gaaatggaga ttgtcaagct gctgaaggag aacacgacgc tgctgaggct 1080
91 gggataccat tttgaactcc caggaccaag aatgagcatg acgagcattt tgacaagaaa 1140
92 tatggataaa cagaggcaaa aacgtttgca ggagcaaaaa cagcaggagg gatacgatgg 1200
93 aggacccaat cttaggacca aagtctggca aagaggaaca cctagctctt caccttatgt 1260
94 atctcccagg cactcaccct ggtcatcccc aaaactcccc aaaaaagtcc agactgtgag 1320
95 gagccgtcct ctgtctcctg tggccacact tcctcctcct ccccctcctc ctcctcctcc 1380
96 ccctccttct tcccaaaggc tgccaccacc tcctcctcct ccccctcctc cactcccaga 1440
97 gaaaaagctc attaccagaa acattgcaga agtcatcaaa caacaggaga gtgcccaacg 1500
98 ggcattacaa aatggacaaa aaaagaaaaa agggaaaaag gtcaagaaac agccaaacag 1560
99 tattctaaag gaaataaaaa attctctgag gtcagtgcaa gagaagaaaa tggaagacag 1620
100 ttcccgacct tctaccccac agagatcagc tcatgagaat ctcatggaag caattcgggg 1680
101 aagcagcata aaacagctaa agcgggtgga agttccagaa gccctgcgat gggaacatga 1740
102 tctttagaag aggatgcaga actgttcagt ggtattacat gaaatgcatt gtgagatgtt 1800
103 tctaaaatac cttcttcaat tcaaaatgat ccctgacttt aaaaataatc tcacccatta 1860
104 attccaaaga gaatcttaag aaacaatcag catgtttctt ctgtaaatat gaaaataaat 1920
105 ttctttttta tgtcgtgaga tttgtattgg caagaagcag ttaatttaaa gatgctcttc 1980
106 ctatctgtgg atgtgttggt aactccgagt tgtaatgagt tcatgaaatg tgctgttatt 2040
107 tttgtaatct caataaatgt ggattgaagt tttttccctt 2080

RAW SEQUENCE LISTING DATE: 04/12/2002
PATENT APPLICATION: US/09/445,362B TIME: 15:09:45

Input Set : A:\50125.008001.SEQLIST.TXT
Output Set: N:\CRF3\04122002\I445362B.raw

<210> SEQ ID NO: 3
<211> LENGTH: 2268
<212> TYPE: DNA
<213> ORGANISM: Homo sapiens
<400> SEQUENCE: 3
cagcctgcca cttgcctccc tgcctgcttc tggctgcctt gaatgcctgg tccttcaagc 60
tccttctggg tctgacaaag cagggaccat gtctaccttt ggctaccgaa gaggactcag 120
taaatacgaa tccatcgacg aggatgaact cctcgcctcc ctgtcagccg aggagctgaa 180
ggagctagag agagagttgg aagacattga acctgaccgc aaccttcccg tggggctaag 240
gcaaaagagc ctgacagaga aaacccccac agggacattc agcagagagg cactgatggc 300
ctattgggaa aaggagtccc aaaaactctt ggagaaggag aggctggggg aatgtggaaa 360
ggttgcagaa gacaaagagg aaagtgaaga agagcttatc tttactgaaa gtaacagtga 420
ggtttctgag gaagtgtata cagaggagga ggaggaggag tcccaggagg aagaggagga 480
agaagacagt gacgaagagg aaagaacaat tgaaactgca aaagggatta atggaactgt 540
aaattatgat agtgtcaatt ctgacaactc taagccaaag atatttaaaa gtcaaataga 600
gaacataaat ttgaccaatg gcagcaatgg gaggaacaca gagtccccag ctgccattca 660
cccttgtgga aatcctacag tgattgagga cgctttggac aagattaaaa gcaatgaccc 720
tgacaccaca gaagtcaatt tgaacaacat tgagaacatc acaacacaga cccttacccg 780
ctttgctgaa gccctcaagg acaacactgt ggtgaagacg ttcagtctgg ccaacacgca 840
tgccgacgac agtgcagcca tggccattgc agagatgctc aaagccaatg agcacatcac 900
caacgtaaac gtcgagtcca acttcataac gggaaagggg atcctggcca tcatgagagc 960
tctccagcac aacacggtgc tcacggagct gcgtttccat aaccagaggc acatcatggg 1020
cagccaggtg gaaatggaga ttgtcaagct gctgaaggag aacacgacgc tgctgaggct 1080
gggataccat tttgaactcc caggaccaag aatgagcatg acgagcattt tgacaagaaa 1140
tatggataaa cagaggcaaa aacgtttgca ggagcaaaaa cagcaggagg gatacgatgg 1200
aggacccaat cttaggacca aagtctggca aagaggaaca cctagctctt caccttatgt 1260
atctcccagg cactcaccct ggtcatcccc aaaactcccc aaaaaagtcc agactgtgag 1320
gagccgtcct ctgtctcctg tggccacact tcctcctcct ccccctcctc ctcctcctcc 1380
ccctccttct tcccaaaggc tgccaccacc tcctcctcct ccccctcctc cactcccaga 1440
gaaaaagctc attaccagaa acattgcaga agtcatcaaa caacaggaga gtgcccaacg 1500
ggcattacaa aatggacaaa aaaagaaaaa agggaaaaag gtcaagaaac agccaaacag 1560
tattctaaag gaaataaaaa attctctgag gtcagtgcaa gagaagaaaa tggaagacag 1620
ttcccgacct tctaccccac agagatcagc tcatgagaat ctcatggaag caattcgggg 1680
aagcagcata aaacagctaa agcgggtgga agttccagaa gccctgcgat gggaacatga 1740
tctttagaag aggatgcaga actgttcagt ggtattacat gaaatgcatt gtgagatgtt 1800
tctaaaatac cttcttcaat tcaaaatgat ccctgacttt aaaaataatc tcacccatta 1860
attccaaaga gaatcttaag aaacaatcag catgtttctt ctgtaaatat gaaaataaat 1920
ttctttttta tgtcgtgaga tttgtattgg caagaagcag ttaatttaaa gatgctcttc 1980
ctatctgtgg atgtgttggt aactccgagt tgtaatgagt tcatgaaatg tgctgttatt 2040
tttgtaatct caataaatgt ggattgaagt tttttccctt tttttaaagc caaactaata 2100
tttttctgtg acttgataca tctgtcagat ttttgtaatc tcgataaatg tgtattgaag 2160
ttttttccct ttttttaaaa agccaaacta atatttttct gtgagttaat acatctgtca 2220
ggtgtgtatg taacattact ggacattaaa aaaaattatt acattctc 2268
<210> SEQ ID NO: 4
<211> LENGTH: 552
<212> TYPE: PRT
<213> ORGANISM: Homo sapiens
<400> SEQUENCE: 4
Met Ser Thr Phe Gly Tyr Arg Arg Gly Leu Ser Lys Tyr Glu Ser Ile

RAW SEQUENCE LISTING DATE: 04/12/2002
PATENT APPLICATION: US/09/445,362B TIME: 15:09:45

Input Set : A:\50125.008001.SEQLIST.TXT
Output Set: N:\CRF3\04122002\I445362B.raw

```
161  1               5                  10                  15
162 Asp Glu Asp Glu Leu Leu Ala Ser Leu Ser Ala Glu Glu Leu Lys Glu
163             20                  25                  30
164 Leu Glu Arg Glu Leu Glu Asp Ile Glu Pro Asp Arg Asn Leu Pro Val
165         35                  40                  45
166 Gly Leu Arg Gln Lys Ser Leu Thr Glu Lys Thr Pro Thr Gly Thr Phe
167     50                  55                  60
168 Ser Arg Glu Ala Leu Met Ala Tyr Trp Glu Lys Glu Ser Gln Lys Leu
169 65                  70                  75                  80
170 Leu Glu Lys Glu Arg Leu Gly Glu Cys Gly Lys Val Ala Glu Asp Lys
171                 85                  90                  95
172 Glu Glu Ser Glu Glu Glu Leu Ile Phe Thr Glu Ser Asn Ser Glu Val
173             100                 105                 110
174 Ser Glu Glu Val Tyr Thr Glu Glu Glu Glu Glu Glu Ser Gln Glu Glu
175         115                 120                 125
176 Glu Glu Glu Glu Asp Ser Asp Glu Glu Glu Arg Thr Ile Glu Thr Ala
177     130                 135                 140
178 Lys Gly Ile Asn Gly Thr Val Asn Tyr Asp Ser Val Asn Ser Asp Asn
179 145                 150                 155                 160
180 Ser Lys Pro Lys Ile Phe Lys Ser Gln Ile Glu Asn Ile Asn Leu Thr
181                 165                 170                 175
182 Asn Gly Ser Asn Gly Arg Asn Thr Glu Ser Pro Ala Ala Ile His Pro
183             180                 185                 190
184 Cys Gly Asn Pro Thr Val Ile Glu Asp Ala Leu Asp Lys Ile Lys Ser
185         195                 200                 205
186 Asn Asp Pro Asp Thr Thr Glu Val Asn Leu Asn Asn Ile Glu Asn Ile
187     210                 215                 220
188 Thr Thr Gln Thr Leu Thr Arg Phe Ala Glu Ala Leu Lys Asp Asn Thr
189 225                 230                 235                 240
190 Val Val Lys Thr Phe Ser Leu Ala Asn Thr His Ala Asp Asp Ser Ala
191                 245                 250                 255
192 Ala Met Ala Ile Ala Glu Met Leu Lys Ala Asn Glu His Ile Thr Asn
193             260                 265                 270
194 Val Asn Val Glu Ser Asn Phe Ile Thr Gly Lys Gly Ile Leu Ala Ile
195         275                 280                 285
196 Met Arg Ala Leu Gln His Asn Thr Val Leu Thr Glu Leu Arg Phe His
197     290                 295                 300
198 Asn Gln Arg His Ile Met Gly Ser Gln Val Glu Met Glu Ile Val Lys
199 305                 310                 315                 320
200 Leu Leu Lys Glu Asn Thr Thr Leu Leu Arg Leu Gly Tyr His Phe Glu
201                 325                 330                 335
202 Leu Pro Gly Pro Arg Met Ser Met Thr Ser Ile Leu Thr Arg Asn Met
203             340                 345                 350
204 Asp Lys Gln Arg Gln Lys Arg Leu Gln Glu Gln Lys Gln Gln Glu Gly
205         355                 360                 365
206 Tyr Asp Gly Gly Pro Asn Leu Arg Thr Lys Val Trp Gln Arg Gly Thr
207     370                 375                 380
208 Pro Ser Ser Ser Pro Tyr Val Ser Pro Arg His Ser Pro Trp Ser Ser
209 385                 390                 395                 400
```

RAW SEQUENCE LISTING DATE: 04/12/2002
PATENT APPLICATION: US/09/445,362B TIME: 15:09:45

Input Set : A:\50125.008001.SEQLIST.TXT
Output Set: N:\CRF3\04122002\I445362B.raw

```
210 Pro Lys Leu Pro Lys Lys Val Gln Thr Val Arg Ser Arg Pro Leu Ser
211                 405                 410                 415
212 Pro Val Ala Thr Leu Pro Pro Pro Pro Pro Pro Pro Pro Pro Pro Pro
213             420                 425                 430
214 Pro Ser Ser Gln Arg Leu Pro Pro Pro Pro Pro Pro Pro Pro Pro Pro
215         435                 440                 445
216 Leu Pro Glu Lys Lys Leu Ile Thr Arg Asn Ile Ala Glu Val Ile Lys
217     450                 455                 460
218 Gln Gln Glu Ser Ala Gln Arg Ala Leu Gln Asn Gly Gln Lys Lys Lys
219 465                 470                 475                 480
220 Lys Gly Lys Lys Val Lys Lys Gln Pro Asn Ser Ile Leu Lys Glu Ile
221                 485                 490                 495
222 Lys Asn Ser Leu Arg Ser Val Gln Glu Lys Lys Met Glu Asp Ser Ser
223             500                 505                 510
224 Arg Pro Ser Thr Pro Gln Arg Ser Ala His Glu Asn Leu Met Glu Ala
225         515                 520                 525
226 Ile Arg Gly Ser Ser Ile Lys Gln Leu Lys Arg Val Glu Val Pro Glu
227     530                 535                 540
228 Ala Leu Arg Trp Glu His Asp Leu
229 545                 550
232 <210> SEQ ID NO: 5
233 <211> LENGTH: 10
234 <212> TYPE: DNA
235 <213> ORGANISM: Homo sapiens
237 <400> SEQUENCE: 5
238 ccttctaccc                                                        10
240 <210> SEQ ID NO: 6
241 <211> LENGTH: 278
242 <212> TYPE: DNA
243 <213> ORGANISM: Homo sapiens
245 <220> FEATURE:
246 <221> NAME/KEY: misc_feature
247 <222> LOCATION: 12, 50, 222, 243, 255, 265
248 <223> OTHER INFORMATION: n = A,T,C or G
250 <400> SEQUENCE: 6
W--> 251 gccaacacgc antccgacga cagtgcagcc atggtcattg cagagatgcn caaagtcaat 60
     252 gagcacatca ccaacgtaaa cgtcgagtcc aacttcataa cgggaaaggg gatcctggcc 120
     253 atcatgagag ctctccagca caacacggtg ctcacggagc tgcggtttca taaccagagg 180
W--> 254 cacatcatgg gcagccaggt ggaaatggag attgtcaagc tnctgaagga gaacacgacg 240
W--> 255 ctnctgaggc tgggntacca ttttnaactc ccaggacc                      278
257 <210> SEQ ID NO: 7
258 <211> LENGTH: 92
259 <212> TYPE: PRT
260 <213> ORGANISM: Homo sapiens
262 <400> SEQUENCE: 7
263 Pro Thr Arg Asn Pro Thr Thr Val Gln Pro Trp Ser Leu Gln Arg Cys
264  1               5                  10                  15
265 Ile Lys Val Asn Glu His Ile Thr Asn Val Asn Val Glu Ser Asn Phe
266             20                  25                  30
```